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APR 3644  
JF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: H. KERN  
Serial No.: 10/048,168  
Filed: June 10, 2002  
For: Entirely Combustible Inductive Primer  
Group: 3644  
Examiner: B. Hayes

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APR 01 2004  
**GROUP 3600**

APPELLANT'S BRIEF

Mail Stop: Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

March 29, 2004

Sir:

This brief is being submitted in triplicate in connection with the appeal of the final rejection mailed August 29, 2003, a notice of appeal having been filed January 29, 2004.

REAL PARTY IN INTEREST

The real party in interest is Dynamit Nobel GmbH Explosivstoff-und Systemtechnik, the assignee of the subject application.

RELATED APPEALS AND INTERFERENCES

On information and belief, there are no other appeals or interferences

known to appellant, appellant's legal representative, or the assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

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STATUS OF CLAIMS

Claim 1 has been canceled, leaving claims 2 - 6 pending in the application. All of claims 2 - 6 stand finally rejected and are appealed.

STATUS OF AMENDMENTS

An Amendment After Final Rejection was filed December 29, 2003. The Examiner has indicated that, for purposes of appeal, the amendment will be entered (see the Advisory Action mailed January 13, 2004). Accordingly, the Amendment After Rejection should be entered.

SUMMARY OF THE INVENTION

The present invention relates to a pyrotechnic primer for igniting propellant powder for sleeveless ammunition. See, page 1, lines 1 - 5 of appellant's specification. The principal problem with previous design specifications for inductive primers for sleeveless ammunition has been with the non-combustible components of the receiving coil and the electrical ignition elements. This is particularly the case with relative small caliber diameters because unburned remains of the primer can form residues either in the cartridge chamber or in the barrel which will damage the weapon. See, e.g.,

page 1, lines 16 - 23 of appellant's specification.

The primer of the present invention has an ignition element and a coil in which the energy required for triggering is transferred by electromagnetic means (inductively). In order to avoid the problems heretofore associated with unburned remains of the primer, applicant situates the ignition element and coil on a common, flat, support material, the entire support material consisting of combustible or consumable materials, such as paper or nitro-cellulose. See, page 1, line 32 to page 2, line 5 of appellant's specification. The three-dimensional cylindrical coil is provided by providing conductive tracks 1 on the support material 5 (see Figure 1 and page 3, line 28 to page 4, line 4), rolling the support material 5 to form a cylinder (see Figure 2 and page 4, lines 6 - 12) and laying the post conductor ends 6 of the coil one on top of the other and making a contact between them, with remaining ends 3 of printed circuit traces 1 forming connection surfaces of the ignition element 4 (see Figures 1 and 3 and page 4, lines 14 - 21 and page 3, lines 32 - 35).

## ISSUES

Whether claims 3 and 4 are patentable under 35 USC 102(b) over United States Patent No. 4,651,254 to Brede et al.

Whether claims 2, 5 and 6 are patentable under 35 USC 103 over Brede et al.

## GROUPING OF CLAIMS

With respect to the rejection of claims 3 and 4 under 35 USC 102(b), claims 3 and 4 do not stand or fall together. That is, appellant believes claims 3 and 4 to be separately patentable for the reasons provided hereinafter in the arguments section of this brief.

With respect to the rejection of claims 2, 5 and 6 under 35 USC 103, the claims do not stand or fall together. That is, appellant believes the claims to be separately patentable for the reasons set forth hereinafter in the arguments section of this brief.

## ARGUMENTS

### Claims 3 and 4 are not Anticipated by Brede et al

Claims 3 and 4 are directed to a pyrotechnic primer for igniting propellant powder for sleeveless ammunition. The claims set forth a particular structure for the pyrotechnic primer, i.e., the primer having an ignition element and a coil in which the energy required for triggering is transformed by electromagnetic means (inductively), the ignition element and the coil being situated on a common, flat support material, and the entire support material consisting of combustible or consumable materials. The claims also recite the manner in which the three-dimensional cylindrical coil is produced, i.e., by providing conductive tracks on the support material, rolling the support material to form a cylinder, and laying opposed conductor ends of the coil one on top of the other and making contact between them, with the remaining ends of printed circuit

traces forming connection surfaces of the ignition element. Neither the manner in which the three-dimensional cylindrical coil is produced nor the three-dimensional cylindrical coil produced thereby is disclosed or suggested by Brede et al.

The Brede et al patent also does not disclose and would not have suggested the primer set forth in Claim 4, including that the coil is applied to the support material by screen-printing silver or copper conductive paste.

Claims 2, 5 and 6 are Patentable over Brede et al

Claims 2, 5 and 6 are patentable for at least the reasons noted above. Moreover, claim 2 requires that the entire support material of the primer consist of paper or nitro-cellulose while claim 5 requires that the entire support material comprises paper and claim 6 requires that the entire support material comprises nitro-cellulose. The Examiner recognizes that the Brede et al patent does not disclose these features. The Examiner, however, concludes that it would have been obvious to make the support material of paper and nitro-cellulose. However, no prior art is cited which supports this conclusion. The deficiencies of the cited reference cannot be remedied by the Examiner's general conclusions about what is basic knowledge or common sense. In re Lee, 277 F.3d 1338, 1344, 61 USPQ 2d 1430, 1434-5 (Fed. Cir. 2002); In re Zurko, 258 F.3d 1379, 1385, 59 USPQ 2d 1693, 1697 (Fed. Cir. 2001). The Examiner's general conclusion as to what would have been obvious does not find any corresponding suggestion or motivation in the prior art.

Thus, the Brede et al patent does not disclose a primer as presently claimed, including the entire support material consisting of paper and nitro-cellulose, set forth in claim 2.

The Brede et al patent also does not disclose and would not have suggested the primer set forth in claim 5 wherein the entire support material comprises paper.

The Brede et al patent also does not suggest the primer set forth in claim 6, wherein the entire support material comprises nitro-cellulose.

For the foregoing reasons, the final rejections of the claims should be reversed.

#### CONCLUSION

For the foregoing reasons, the Examiner's rejections should be reversed by this honorable Board.

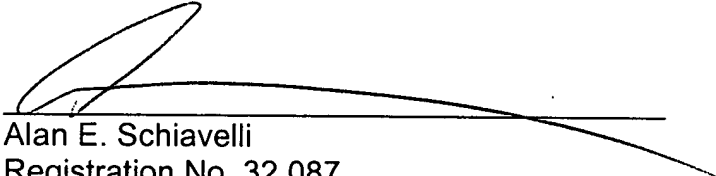
A copy of the claims on appeal, i.e., claims 2 - 6 is found in the attached appendix.

To the extent necessary, appellants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of

Antonelli, Terry, Stout & Kraus, Deposit Account No. 01-2135 (Case:  
306.41102X00), and please credit any excess fees to said deposit account.

Respectfully submitted,

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## APPENDIX A

2. Primer according to claim 3, characterised in that the entire support material of the primer consists of paper or nitro-cellulose.
3. Pyrotechnic primer for igniting propellant powder for sleeveless ammunition, the primer having an ignition element and a coil in which the energy required for triggering is transferred by electromagnetic means (inductively), characterised in that the ignition element and the coil are situated on a common, flat support material, the entire support material consisting of combustible or consumable materials, and in that a three-dimensional cylindrical coil is produced by providing conductive tracks on the support material, rolling the support material to form a cylinder, and laying opposed conductor ends of the coil one on top of the other and making a contact between them, with remaining ends of printed circuit traces forming connection surfaces of the ignition element.
4. Primer according to claim 3, characterised in that the coil is applied to the support material by screen-printing silver or copper conductive paste.
5. Primer according to claim 3, characterised in that the entire support material comprises of paper.
6. Primer according to claim 3, characterised in that the entire support



material comprises of nitro-cellulose.